

REMARKS

Claims 1-19 are pending in the present application, and are rejected. Claim 1 is herein amended. No new matter has been entered.

Claim Rejections - 35 U.S.C. §103(a)

Claims 1, 2, 4, 6, 8, 9, 12, 14 and 16 remain rejected under 35 U.S.C. §103(a) as being unpatentable over Misium et al. (US Patent 6,261,973) in view of Wong (US Patent 5,423,944). The Examiner asserts that it would have been obvious to combine the teachings of Misium and Wong because the “oxidizing agents such as nitric acid help remove defects” (as noted in Wong column 1 lines 20-25).

Claims 1, 2, 3, 5, 11, 18 and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wong in view of Dobuzinsky et al. (US Patent 5,412,246). The Examiner admits that Wong fails to disclose forming a second insulation film by low temperature processing. The Examiner concludes that it would have been obvious to combine the teachings of Dobuzinsky et al. in view of Wong because the oxidizing agents such as nitric acid help remove defects (see Wong column 1, lines 20-25).

Claims 13 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wong in view of Dobuzinsky et al. as applied to claim 3 above, and further in view of Misium et al. The Examiner admits that Wong and Dobuzinsky et al. fail to teach the use of nitric acid and an ozone containing solution. The Examiner concludes that it would have been obvious to one of

ordinary skill to combine the teachings of Wong, Dobuzinsky et al. and Misium et al. because the oxidizing agents such as nitric acid help remove defects (Wong column 1, lines 20-25).

Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Misium et al. in view of Wong. The Examiner concludes that it would have been obvious to make an oxide film greater than 1 nm, because doing so merely involves discovering the optimum or working ranges.

Claim 19 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wong in view of Dobuzinsky et al. The Examiner admits that Wong fails to disclose forming a second insulation film by low temperature processing after a fixed period of time. The Examiner concludes that because Dobuzinsky et al. forms the nitride after the oxide, there is inherently a fixed period of time.

Applicants herein amend claim 1 to clarify the invention. Thereafter, Applicants respectfully disagree with the rejection because not all of the claimed limitations are met by the cited combination of references.

The Examiner asserts that Misium (or Dobuzinsky) discloses forming a first insulation film on the substrate and then subsequently forming a second dielectric film on the first insulation film by low temperature processing, and that Wong discloses forming a first isolation film by using strong acid solution, therefore the present invention (claim 1) is obvious from the combination of Misium and Wong.

In the amended claim 1 of the present invention, a first insulation film is formed by a strongly acidic cleaning solution, which is used in cleaning a surface of a semiconductor substrate.

On the other hand, Wong discloses an oxide film formed by using nitric acid HNO_3 or hydrogen peroxide H_2O_2 (column 1, lines 19-20), however, Wong fails to disclose or suggest that the oxide film is formed by a strongly acidic solution used in cleaning a surface of a semiconductor substrate.

Therefore, even if Wong and Misium (or Dobuzinsky) were properly combined, such combination would not teach all of the limitations of the present invention.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Kenneth H. Salen

Attorney for Applicants
Registration No. 43,077
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

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